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ENTOMOLOGY.—*New Saldidae (Hemiptera) from the Old World.* Carl J. Drake, Iowa State College, Ames, Iowa.

The present paper contains the descriptions of five new shore bugs or Saldidae from Africa and India. I am indebted to Dr. W. E. China, of the British Museum (Natural History), London, for the privilege of studying many saldids from various regions of the world. The types of the new species are deposited in the British Museum. In the descriptions, the ocular micrometer scale and magnification are such that 80 units of length or width equal one millimeter. I am also indebted to Mr. Arthur Smith, artist of the above Museum, for the fine drawing of the type of *Saldula championi*, n. sp.

Chiloxanthus sangchana, n. sp.

Large, black, slightly shining, without color markings; pubescence moderately dense, very short, reclining, not very conspicuous. Head black, considerably flattened in front, with only a small pale spot near the inner excavation of each eye; ocelli pale, not elevated, with the space between them about equal to the diameter of an ocellus; width across eyes, 1.25 mm. Antennae black, shortly pilose, with only a small subapical spot on second segment brownish testaceous, measurements—I, 21; II, 130; III, 81; IV, 80. Legs black, the middle and hind femora with a long, narrow, testaceous or brownish stripe on the front face of each; pubescence and spine-like hairs black; tarsi with some testaceous on dorsal surface of segments II and III.

Pronotum broad, slowly narrowed anteriorly, with lateral margins rectate, with some bristly hairs on anterior third of outer margin, deeply roundly excavated behind, three times as wide at base as median length (180:60), with front margin much narrower than basal width (100:180); callus large, little elevated, with a shallow discal impression; about three times as long as hind lobe, marked off behind by a shallow transverse furrow; collar very narrow. Scutellum slightly convex, scarcely wider at base than median length (128:120), nearly smooth, indistinctly rugulose, with a deep transverse impression at the middle. Hemelytra wide, with surface faintly rugulose; membrane lightly clouded with fuscous, with veins darker, composed of four cells, the fourth cell shorter than bordering cell, not reaching the peripheral vein.

Length, 6.25 mm; width, 1.50 mm.

Type (female), Sangcha, north of Kamaon, India, elevation 14,500 feet, H. G. Champion.

This species does not fit into the "Synopsis Specierum Subgenera *Chiloxanthus* Reuter" as keyed by Kiritshenko, Ann. Mus. Zool. Acad. Sci. **16**: 545–546, 1916. It appears to be closest to *C. lama* Kiritshenko and *C. kozlovi* Kiritshenko, both from Tibet.

Calacanthia tibetana, n. sp.

Head black, with calloses next to eyes and frontal callosities flavous; ocelli small, yellowish, slightly elevated, separated by less than half of the diameter of an ocellus; eyes large, grayish brown, with a few very short hairs. Antennae rather stout, blackish fuscous with the inner sides of I and II flattened and testaceous, densely pilose with some scattered longer hairs; segments I and II stouter than others, with the pubescent hairs bordering pale flattened side whitish, with only a few stiff brown bristles on flavous surface, measurements—I, 30; II, 56; III, 36; IV, 40. Rostrum long, extending between hind coxae, brownish testaceous. Body beneath blackish with acetabula whitish testaceous and the posterior margins of ventrites whitish. Legs flavotestaceous; femora with posterior side and conspicuous spots (arranged in rows) dark fuscous; tibiae armed with long, dark brownish fuscous, stiff, bristly spines, which are placed on small dark fuscous spots, tips of tibiae also infuscate; tarsi with the short basal segment and also apical half of third dark fuscous.

Pronotum black, slightly shining, finely rugulose, moderately narrowed anteriorly, with exterior margins nearly straight and narrowly margined (above and beneath) with flavous, more than twice as wide at base as median length (110:40); pubescence moderately dense, decumbent, grayish; callus large, not very high, not extending laterally on explanate margins, with a large, deep, discal impression; hind lobe short, scarcely half as long as callus, deeply broadly excavated behind. Sculellum large, very little convex, finely rugulose behind, transversely impressed at the middle, black slightly shining, with pubescence somewhat golden apically. Hemelytra rather dull, dark fuscous with a bluish tinge, clothed with short, somewhat fallen, golden pubescence; clavus without pale marks; corium quite variable in amount of flavous, with a few small flavous spots or with most of outer corium and outer part of inner corium partly flavous; membrane dusky flavous, with four cells, each cell with fuscous spots.

Length, 4.25–5.00 mm; width, 2.00–2.25 mm.

Type (macropterous male) and *allotype* (macropterous female), Supi River, Tibet, under stones, altitude, 15,000 feet, H. G. Champion. Paratypes: 7 specimens, same data as type.

Separated from *C. trybomi* (J. Sahlberg) by the flavous legs with fuscous markings, less elevated callus, shorter second antennal segment and lack of sparsely scattered long hairs on dorsal surface of hemelytra.

Saldula championi, n. sp. (Fig. 1)

Elongate, black, slightly shining, with prominent testaceous markings as described in structures; dorsal surface clothed with fine, erect, pale hairs, the hairs more numerous on hemelytra. Head black, with a pale testaceous spot near the rounded excavation of each eye, with the usual long hairs; frontal callosities mostly flavous. Antennae blackish with the first segment and one side of second whitish or testaceous, the

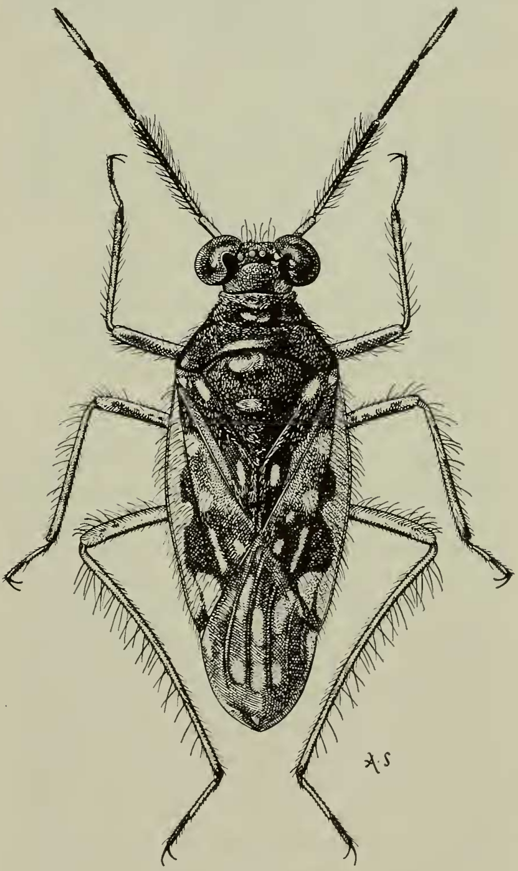

FIG. 1.—*Saldula championi*, n. sp. (type).

fourth segment with a broad band near middle (narrow basal and wider apical part blackish), measurements—I, 32; II, 75; III, 47; IV 43. Ocelli feebly elevated, slightly separated. Width across eyes, 1.05 mm.

Pronotum strongly narrowed anteriorly, deeply excavated behind, with lateral margins straight, with a few erect brownish hairs, the pubescence grayish with a slight golden tinge, recumbent; width at base more than twice the median length (110:40); callus rather high, with a deep discal impression, subequal in length to hind lobe. Hemelytra dark fuscous with pale testaceous marking located as may be seen in the illustration (Fig. 1), rather dull, with some blush areas, color markings a little variable in size; erect hairs brownish with a slight golden lustre, fairly numerous; embolium testaceous with only apex dark fuscous; membrane with four cells, dark fuscous, with pale cellular spots a little variable in size. Legs testaceous with some brownish or fuscous shaded places, quite hairy, especially tibiae and also with longer hairs, the hind tibiae distinctly bowed (Fig. 1); tarsi dark fuscous with second segment testaceous.

Length, 3.90–4.30 mm; width, 1.55 mm.

Type (male) and *allotype* (female), Kumaon, Halduani, District, India H. G. Champion. *Paratypes:* 2 specimens, same labels and data as type. Name in honor of the famous Coleopterous H. G. Champion, who has collected so many rare insects in India.

Distinguished readily from other species of genus *Saldula* Van Duzee in the Orient (or even the entire world) by very hairy second antennal segment and bowed, longly hairy hind tibiae.

Saldula africana, n. sp.

Elongate-ovate, fuscous-black, slightly shining, with prominent flavous markings as described in structural characters, the hemelytra tinged with bluish; pubescence rather short, grayish, more golden on hemelytra; scutellum and hemelytra also rather densely clothed with moderately long, fine, erect, pale hairs, tinged with golden. Head black, with two spots near each eye and frontal callosities flavous; ocelli small, yellowish, separated by nearly the diameter of one of them; width across eyes, 1.12 mm. Antennae black-fuscous, with only a small pale stripe on first segment, shortly pilose, without long hairs, measurements—I, 30; II, 76; III, 52; IV, 53.

Pronotum moderately narrowed anteriorly, with lateral margins straight, deeply excavated behind, with basal width three times median length (130:45); callus large, rather high, with small discal impression, demarcated both in front and behind by a narrow sulcus (small pits at bottom); collar quite narrow; hind lobe finely rugulose, about one-third as long as callus; explanata margins moderately wide, with a short, submarginal, flavous stripe at middle. Scutellum a little raised, slightly wider at base than median length, transversely impressed near the middle, without color marks. Hemelytra rather dull, with nonbluish area dark velvety fuscous, with embolium almost entirely flavous; clavus with a subbasal and subapical spots flavous; corium with a subbasal, another a little beyond the middle and three or four apical marks flavous; outer corium with an apical spot pale flavous; membrane fuscous with veins darker and a median longitudinal streak in each of the four cells somewhat flavous. Body beneath black, densely clothed with short whitish hairs. Legs long, slender, with pale pubescence; trochanters and margins of acetabula pale testaceous; coxae testaceous; fore and middle femora blackish fuscous with bases and tips somewhat testaceous, the tibiae fuscous with subapical band testaceous, the tarsi black-fuscous; hind femora and tibiae brownish testaceous with some fuscous areas, the tarsi black-fuscous.

Length, 4.75 mm; width, 2.00 mm.

Type (male), Nanwamda Valley, Kyanjok, Ruwenzori Range, Uganda, Africa, elevation 6,500 feet; *allotype* (female), Swan River, Mount Elgon, Kenya, elevation 5,000 feet, F. W. Edwards. *Paratypes:* 1 male, same data as allotype, 1 male with type and 1 male, Kilembe, Ruwenzori Range, Uganda, Dec., 1934, F. W. Edwards.

This species may be separated from its African congeners by the elongate form and the somewhat golden hairy clothing of scutellum and hemelytra.

Saldula capicola, n. sp.

Moderately large, obovate, black, slightly shining, with hemelytra blackish fuscous and prominently marked with flavous or brownish flavous spots (two spots on clavus, four spots on inner corium, and apical spot on outer corium), almost entire embolium and also a narrow marginal stripe on each side of pronotum flavous. Legs blackish fuscous with trochanters, base of femora, most of dorsal face of tibiae and second tarsal segments testaceous or brownish testaceous. Pubescence short, grayish, somewhat golden on hemelytra. Venter black, slightly shining, with hind margin of segments narrowly testaceous. Female unknown.

Head black with the two calloses near each eye and frontal callosities flavous; width across eyes, 1.15 mm. Antennae black-fuscous, shortly pilose, measurements—I, 30; II, 55; III, 46; IV, 46. Pronotum moderately obliquely narrowed anteriorly, with outer edge rectate, broadly roundly excavated behind, with basal width three times median length (130:40); callus moderately large, not extending laterally on explanata margins, set-off by the usual transverse sulci, with discal impression slightly in front of middle, about one and a half times as long as hind lobe. Scutellum a little convex, with the usual transverse impression near the middle, slightly wider at base than median length (90:80). Hemelytra with flavous embolium edged along the margin with fuscous; membrane with four cells, dark fuscous, with two or three whitish spots in each cell.

Length, 4.00 mm; width, 0.90 mm.

Type (male), Witte Esbosch, on rockface trickling with water, South Africa, Jan. 10, 1927, G. E. Hutchson. *Paratypes:* 2 males, same data as type.

This species is smaller than *S. africana*, n. sp., and lacks the hairy clothing on dorsal surface of body.

ENTOMOLOGY.—Ayurakitia, *a new genus of mosquito from northern Thailand* (Diptera: Culicidae). Deed C. Thurman, Jr.[1] (Communicated by Ernestine B. Thurman.)

This new genus is proposed for a single Northern Thailand species, the males of which in general appearance seem similar to the males of the genus *Aedes* but differ morphologically in lacking postspiracular bristles. The presence of a fringe on the squama and the absence of both spiracular and postspiracular bristles bring the species into close relationship with those of *Haemagogus*, *Heizmannia*, *Ficalbia*, and *Mansonia* (*Coquillettidia*). However, *Haemagogus* and *Heizmannia* have the anterior pronotal lobes enlarged and all *Heizmannia* and some species of *Haemagogus* bear tufts of hair on the postnotum; *Ficalbia* have the proboscis swollen at the apex; and *Mansonia* (*Coquillettidia*) have distinct tibial bristles, and are large yellowish mosquitoes, while the new species has normal pronotal lobes, a bare postnotum, a normal proboscis, and no tibial bristles, and the specimens are small with silvery markings. Superficially the males somewhat resemble the males of *Paraedes*, although the distinct generic characters of *Paraedes* (squama bare, postspiracular bristles present, and no lower mesepimeral bristles) serve to distinguish the two.

While this species is being separated from the genus *Aedes* on the lack of postspiracular bristles, Aitken (1941) erected *Kompia*, a lower Sonoran region subgenus of *Aedes*, for specimens (females) without postspiracular bristles, reporting that *Kompia* was closely related to the subgenus *Finlaya*, differing only in the absence of this character. Vargas (1950) relegated *Kompia* to synonymy under the subgenus *Ochlerotatus* based only on the structures of the male terminalia, disregarding the accepted subgeneric characters for females of *Ochlerotatus* (cerci long, eighth abdominal segment narrow and completely retractile) though females of *Kompia* are obviously different.

Should the absence of postspiracular bristles be disregarded and the new species be placed into the genus *Aedes* (following Aitken, 1941), the structures of the male terminalia would show a close affinity to *Aedes* (*Finlaya*) in lacking a basal lobe on the basistyle, and to *Aedes* (*Aedimorphus*) in that the dististyle is highly modified; but differing from *Finlaya* in having a simple claspette without an articulated appendage, and from *Aedimorphus* by possessing a

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[1] Sanitarian, Division of International Health, United States Public Health Service, assigned as Regional Malaria Control Adviser for Northern Thailand with the U. S. A. Operations Mission to Thailand (USOM) of the Foreign Operations Administration. (This paper was submitted for publication by Mrs. Ernestine B. Thurman after the death of the author. Mr. Thurman died suddenly in Chiengmai of illness contracted while on duty in Northern Thailand only nine days prior to the completion of his assignment.)